Getting to know: Barrel cactus!

The plant with something for everyone

The barrel cactus is an important partner for lots of desert species. Not only does the plant receive pollination from insects and seed dispersal from vertebrates, but it also hires ants to defend it against insect herbivores. It does this by producing sugary nectar that the ants can feed on. By providing food year-round and attracting stinging or aggressive ants, the plants stay relatively damage-free.

Built to save water:

Barrel cactus spines both deter mammal herbivores and protect against sunburn. The spines reflect harmful UV radiation and protect vulnerable fleshy surfaces. Like all plants, barrel cacti take in CO₂, which they use to make food, through their stomata. Many desert plants open these stomata at night to minimize water loss. The barrel’s deep side grooves also allow the plant to swell and store water without tearing.

Pollination is a must:

The barrel cactus is an out-crosser that must be pollinated in order to produce seeds. Its open flower shape makes it appealing to many insects, but native solitary bees are the most important pollinators.

Pollinators add up:

Each barrel cactus fruit contains hundreds to thousands of seeds. A single visit from a pollinator results in about 20% of average seed production. Most flowers probably receive about 6 visitors over the 2-5 days they are open.

Life after death:

Uprooted barrel cactus have survived up to 6 years in a laboratory without water! In the wild, hard frosts are more life-threatening than extreme heat. Once dead, the rotting tissue of this cactus can be home to more than 35 different beetle species.